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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/151,115	09/10/1998	THOMAS A. GLYNN	10576/1	7311

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EXAMINER
CONNELLY CUSHWA, MICHELLE R

ART UNIT	PAPER NUMBER
2874	

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/151,115	GLYNN, THOMAS A.	
	Examiner	Art Unit	
	Michelle R. Connelly-Cushwa	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 November 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 September 1998* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

Applicant's Amendment filed November 4, 2002 has been fully considered and entered.

Applicant indicated that a new oath or declaration was attached to the Amendment filed November 4, 2002, however, no new oath or declaration was received.

Oath/Declaration

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
It does not state whether the invention is a sole or joint invention of the invention claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larson et al. (US 5,701,380) in view of Parzygnat et al. (US 5,7^4,516).

Regarding claims 1-5, 7 and 14; Larson et al. discloses a telecommunication fiber optic infrastructure, comprising:

- a fiber center distributing frame comprising a fiber center distributing frame module (1), having
  - an inside plant / front portion including
    - front tray module openings (13),
    - fiber optic connectors (10),
    - cable retainers (15),
    - cable wrap post mounts (17),
    - cable wrap posts (18), and
    - cable retainers (19),
    - wherein a cable pathway is formed by the cable retainers, wrap post mounts, and wrap posts;
    - wherein the fiber optic connectors (10) comprise a plurality of inside mounting positions; and
    - wherein each one of the inside mounting positions is equipped when a cable is connected to the connector and unequipped when no cable is connected to the connector;
  - an outside plant / rear portion, including
    - rear tray module openings (14) and
    - fiber optic connectors (11);

- equipment cable ports (9); and
- two tray module housings / standard equipment bays (2) proximately located and aligned in parallel rows substantially perpendicular to the fiber center distribution frame, wherein the inside mounting positions (10) are included in the equipment bays (2);
- wherein the interconnection from the outside plant / rear portion to the inside plant / front portion is made to any one of the plurality of inside mounting positions (10) which is in an equipped operating state, the equipped operating state occurring when a cable from central office equipment is connected to a cable port (9) by a connector (10); and
- wherein a ratio of outside plant / rear connections to inside plant / front connections is less than 1 to 1, when there are more cables connected to the front portion of the distribution frame than the rear portion.

In column 1, lines 18-40, Larson et al. discloses that connection and distribution of fiber cables generally occurs at a system location referred to as a fiber distribution frame, and that known fiber distribution frame systems include front and rear sides, with the rear side adapters connected to the fiber optic cables which are in turn connected to outside plant / remote locations.

Larson et al. does not specifically state that the disclosed fiber distribution frame forms a cable interface from at least one remote equipment to at least one central office equipment, although Larson et al. does state that outside plant location or remote equipment is connected to the rear of the distribution frame.

Parzygnat et al. teaches that there are many applications that utilize an optical fiber network to establish optical communications between a central office and a remote location, and that because a central office serves as the point of origin for the optical fiber in an optical fiber network, fiber administration systems (i.e. distribution frames) are typically used at the central office to manage the flow of optical signals as they are directed to or from various remote locations in the network. Parzygnat et al. goes on to state that in many fiber administration systems, as the optical fibers enter the central office, they are directed into an optical distribution frame where the individual fibers are terminated in an organized manner, that optical distribution frames located at central offices typically define a plurality of equipment bays having connection modules that receive the fibers, and that the fibers are selectively coupled to other optical equipment located at the central office (see column 1, line 35, through column 2, line 4).

Thus, one of ordinary skill in the art would have recognized that optical distribution frames are conventionally used to form cable interfaces between remote equipment and central office equipment, as this is very elementary in the art. Therefore, one of ordinary skill in the art would have found it obvious to use the fiber distribution frame disclosed by Larson et al. to connect remote equipment to central office equipment through cable interfaces, since optical distribution frames are typically

employed for this very purpose and Larson et al. states that remote equipment or outside plant equipment is connected to the rear / outside plant portion of the distribution frame.

Regarding claims 6 and 8; Larson et al. discloses all of the limitations of claims 6 and 8, except for there being two fiber distributing frames. Larson et al. teaches the use of fiber distribution frames for organizing/connecting optical fibers efficiently. It would have been obvious to one having ordinary skill in the art at the time of the invention to further provide a second or additional fiber distributing frames to provide additional organization/connections for more optical fibers, since it has been held that mere duplication of the essential working parts of a device involves only routing skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Regarding claims 9 and 10; Larson et al. discloses all of the limitations of claims 9 and 10, except for standard length connector jumper cables connecting the optical equipment to the equipment bay connectors (10). Official notice is taken that standard length connector jumper cables are well known in the art of optical fiber connection systems and that the practice of using standard length connector jumper cables to connect optical equipment to connectors in equipment bays of distribution systems is well established in the art (see the disclosures of Vidacovich et al., U.S. Patent No. 5,402,515, and Ghandeharizadeh et al., U.S. Patent No. 5,490,229, for examples of the common use of standard length connector jumper cables). Therefore, one of ordinary skill in the art would have found it obvious to use standard length connector jumper

cables to connect optical equipment from a central office to the equipment bay connectors (10) in the invention of Larson et al., as this is very elementary in the art.

Regarding claims 11-13; Larson et al. discloses all of the limitations of claims 11-13, except for the equipment cables comprising first, second, and third lengths; for the cable including at least one reference mark; or for the first length of cable comprising a plurality of spliced standard length fiber jumpers. One of ordinary skill in the art would have found it obvious to make a first length of equipment cable long enough to reach a farthest connector in a distribution frame where the cable is being connected to, to have a second length of the equipment cable span a distance within the distribution frame to a benchmark within the equipment bay, and to have a third length of the equipment cable span from the benchmark to an equipment bay connector, in order to ensure that the cable could be connected with any desired connector in the distribution frame and that there is enough slack to make repairs to the cable, as this is elementary in the art. Additionally, the practice of using reference marks on cables to facilitate deployment of the cables and/or to identify cables is well known and very elementary in the art. Therefore, one of ordinary skill in the art would have found it obvious to incorporate reference marks on fiber for deployment / identification purposes. Furthermore, one of ordinary skill in the art would have found it an obvious design choice to have the first section of cable connecting to an outside portion comprise a plurality of spliced jumpers, since standard splice jumpers are readily available and commonly used to connect optical equipment to distribution frames.

Claims 1-5, 7 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ghandeharizadeh et al. (US 5,490,229) in view of Parzygnat et al. (US 5,784,516).

Regarding claims 1-5; Figures 1 and 2 of Ghandeharizadeh et al. disclose a fiber optic infrastructure comprising:

- a frame (10);
- a plurality of standard equipment bays (11, 14);
- a plurality of modules (20) placed within the equipment bays, having cable ports and a plurality of inside mounting positions (34);
- an inside plant portion defined by the equipment bay (11) connected to the trunk lines (12);
- an outside plant portion defined by the equipment bay (14) connected to the transmission lines (13);
- wherein equipment is connected to the inside and outside plant portions through cable ports (50) using interconnects;
- wherein each inside mounting position is in a designated state selected from a group of operating states, including an equipped state when a cable is connected to the mounting position;
- wherein a connection from the outside plant portion to the inside plant portion is made to one a plurality of mounting positions via a

cable interface that runs along a fiber pathway between the equipment bays;

- wherein the equipment bays (11, 14) are aligned in parallel rows substantially perpendicular to a side of the frame (10) and the inside mounting positions (34) are contained within the standard equipment bays (11, 14); and
- wherein two of the parallel rows of standard equipment bays are proximately located to one frame (10).

Ghandeharizadeh et al. does not specifically state that the disclosed distribution frame connects remote equipment to central office equipment.

Parzygnat et al. teaches that there are many applications that utilize an optical fiber network to establish optical communications between a central office and a remote location, and that because a central office serves as the point of origin for the optical fiber in an optical fiber network, fiber administration systems (i.e. distribution frames) are typically used at the central office to manage the flow of optical signals as they are directed to or from various remote locations in the network. Parzygnat et al. goes on to state that in many fiber administration systems, as the optical fibers enter the central office, they are directed into an optical distribution frame where the individual fibers are terminated in an organized manner, that optical distribution frames located at central offices typically define a plurality of equipment bays having connection modules that receive the fibers, and that the fibers are selectively coupled to other optical equipment located at the central office (see column 1, line 35, through column 2, line 4).

Thus, one of ordinary skill in the art would have recognized that optical distribution frames are conventionally used to form cable interfaces between remote equipment and central office equipment, as this is very elementary in the art. Therefore, one of ordinary skill in the art would have found it obvious to use the fiber distribution frame disclosed by Ghandeharizadeh et al. to connect remote equipment to central office equipment through cable interfaces, since optical distribution frames are typically employed for this very purpose and Chandeharizadeh et al. states that remote equipment or outside plant equipment is connected to the rear / outside plant portion of the distribution frame.

Regarding claim 7; a fiber cable pathway connects the two parallel rows of standard equipment bays (11, 14) to the frame (10), (see Figure 1).

Regarding claim 9; in column 2, line 20, through column 3, line 12, Ghandeharizadeh et al. discloses that a standard jumper connects the at least one central office equipment to an equipment bay connector, the equipment bay connector being proximately located to an equipment bay corresponding to an inside mounting position on which the at least one central office equipment is located; and that an equipment cable is coupled between the equipment bay connector and the outside portion using an interconnect.

Regarding claim 10; the equipment cable is deployed along a fiber cable pathway in the invention of Ghandeharizadeh et al.

Regarding claim 11; the equipment cable comprises a first section having a length to reach a farthest connector of the outside portion; a second section having a

length that spans a distance from the frame to an equipment bay benchmark; and a third section having a length that spans from the equipment bay benchmark to the equipment bay connector in the invention of Ghandeharizadeh et al.

Regarding claim 12; Ghandeharizadeh et al. discloses all of the limitations of claim 12 as applied to claim 11, except for the cable including at least one reference mark to facilitate deploying the cable along the fiber cable pathway. The practice of using reference marks on cables to facilitate deployment of the cables and/or to identify calbes is well known and very elementary in the art. Therefore, one of ordinary skill in the art would have found it obvious to incorporate reference marks on fiber cable for deployment / identification purposes.

Regarding claim 13; in column 2, line 20, through column 3, line 12, Ghandeharizadeh et al. discloses that the first section may comprise a plurality of spliced fiber jumpers.

Regarding claim 14; the ratio of outside portion termination connections to inside portion termination connections is less than 1 to 1 in the invention of Ghandeharizadeh et al.

Response to Arguments

Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

The Examiner would like to direct Applicant's attention to several references, other than those relied upon for the rejections set forth above, that indicate that distribution systems including distribution frames are commonly used to connect remote

location equipment to central office equipment through cable interfaces. For example: See column 1, lines 21-57, of Pimpinella (US 5,960,130); column 1, lines 14-50, of Pimpinella (US 6,055,343); column 1, lines 11-24, of Larson et al. (US 5,530,954); column 1, line 40, through column 2, line 11, of Leone et al. (US 5,724,468); and the abstract of Schembri (WO 90/10884). Thus, it is well within the level of one of ordinary skill in the art to use distribution frames to interconnect remote location equipment to central office equipment with cable interfaces, since this is a common, well known use for distribution frames.

Conclusion

Any inquiry concerning the merits of this communication should be directed to Examiner Michelle R. Connelly-Cushwa at telephone number (703) 305-5327. Any inquiry of a general or clerical nature (i.e. a request for a missing form or paper, etc.) should be directed to the Technology Center 2800 receptionist at telephone number (703) 308-0956 or to the technical support staff supervisor at telephone number (703) 308-3072.

Michelle R. Connelly-Cushwa
MRCC
January 23, 2002